33. A method according to claim 17 wherein the objects comprise cardboard containers.

34. The method according to claim 17 additionally comprising the step of applying additional said liquid lubricant composition to the conveyor belt surface, with or without dilution with water, whereby incidental spillage of extraneous material from said conveyor belt surface is removed without substantial loss of the required lubricity.

35. The method for lubricating a conveyor belt surface according to claim 17 wherein said liquid composition is applied onto the surface of a conveyor belt using a flicker non-contact applicator, containing

a) a motor-driven, rotating, tubular brush which picks up said liquid composition from a sump via transfer rollers, and

b) a steel plate mounted against the brush which flicks the bristles as the brush rotates, to generate a mist of droplets of liquid material directed on to the surface of the conveyor belt.

Extension of Time

A response to the Office Action mailed July 16, 2002 was due on October 16, 2002. The $ 400.00 fee for a two-month extension is enclosed. The extended date for response is December 16, 2002.

REMARKS

The claims presented are claims 17-35, a total of 19 claims. No additional fee for the new claims is required.

The content of the previous independent claim 1 has been presented as new independent claim 17 and dependent claim 34. Dependent claims 18 – 29 are substantially similar to previous claims 2-16. Claims 30 – 33 claim more specific embodiments of the objects being conveyed as described in the specification.

Reconsideration of the various grounds of rejection is respectfully requested in view of the foregoing amendments and the remarks which follow.

The rejections under 35 USC 112

Claims 1 – 16 were rejected under 35 USC 112, first paragraph, because the specification allegedly does not enable the preparation and use of all compositions suitable for producing a dry lubricant film on a conveyor belt surface as claimed.

Applicants disagree insofar as this rejection is applied to the present claims because the specification teaches a large number of materials that can be used to form such compositions. At pages 5 – 11 and 14 – 18 of the specification, the preparation of various components used to form such compositions is described. Silicone oils, vegetable oils and mineral oils are described with several examples of each identified. Various alcohols are described and exemplified. Fluorinated resins are described and exemplified and a number of surfactants are disclosed. Other optional ingredients are also disclosed. The method of preparing the compositions usually involves simply mixing the ingredients in an aqueous vehicle or some other liquid vehicle. The materials can be applied by brushing or by other applicators described in the specification. Thus, a large number of embodiments of the invention are described in the specification. It is true that not every combination that would work is identified, but it is believed one skilled in the art having the benefit of applicants' specification, would be able to make and use the invention as claimed without undue experimentation. Applicants have also described various ways to measure which compositions are useful so that they can be readily screened.

The Examiner appears to suggest that there is a high degree of unpredictability in this art area due to applicants' assertion in the specification that they "surprisingly" found that "certain specific liquid formulations suitable for producing a 'dry' lubricant film, can be advantageously used as a conveyor belt lubricant...." And that the claims should be limited to these materials. At the time the invention was made, it was surprising to the inventors that the use of the compositions described and suggested in the present application performed so well as track lubricants given the lack of such teaching in the prior art. However, applicants' have invested time and resources to determine the kinds

of materials that perform as dry lubricants and provided substantial illustration of such materials and how to test their performance. Thus, one skilled in the art having the benefit of applicants' disclosure would now be able to practice the invention as broadly as claimed without undue experimentation. 35 USC 112, first paragraph, and the case law interpreting it does not require that the claims be limited to the specifically disclosed embodiments. It is believed this ground of rejection should be withdrawn with respect to present claims 17-35.

The Examiner rejected claims 1, 3, 4, 6 11 and 16 under 35 USC 112, second paragraph as indefinite with regard to use of the term "aqueous phase".

Applicants believe the term "aqueous phase" is proper in the context of the present invention and the present claims. The term is generally well understood in the art and is not confusing in the context of the present invention. Typically in a multiphase system there is a continuous phase and one or more discontinuous phases. The aqueous phase would include the water and the soluble or miscible components. Non-aqueous , immiscible liquids and dispersed, non-soluble solids would, if present, constitute the other phases. The terminology is standard and well understood in the art. If sufficient water is present to form a water phase it can be up to 95% of the composition. The remainder will be a non-aqueous liquid or an insoluble solid, or both. Alternatively, the composition may be up to 100% non-aqueous liquid, optionally containing a solid. Typically, the composition would comprise water and one of the oils and would form either an oil-in-water emulsion or a water-in-oil emulsion, depending on the relative amounts of each. Where sufficient water is present, the water will be the continuous phase and the oil will be the dispersed, discontinuous phase (note the specification at page 6, lines 16-19). Where there is insufficient water to form a continuous phase, the oil will be the continuous phase and the water will be the dispersed, discontinuous phase forming a water-in-oil emulsion (see specification at page 7, lines 14-22). It is believed the claim is definite and the rejection with respect to claims 17-35 should be withdrawn.

The rejection under 35 USC 103

The Examiner has rejected claims 1-16 under 35 USC 103 as unpatentable over Moses ('836) in combination with Douty et al ('624). This ground of rejectionis traversed insofar as it may b applied to the present claims 17-35.

Moses describes aqueous compositions as lubricants for metal working, general lubrication and gun lubrication (col. 1, lines 23-28, etc.). As the Examiner has noted, Moses does not disclose or suggest the use of the lubricant compositions as track lubricants for smoothly conveying objects.

Douty et al describe the use of a water base silicone emulsion spray to lubricate a conveyor for transporting raw materials containing fines, such as coal, from mines. The invention involves the use of the silicone-containing composition to cause release of the fines from the conveyor so they are not returned with the conveyor and build up on various parts of the conveyor and underneath it.

The present invention is not concerned with either of the art areas described in the references. Rather, the present invention relates to a method of smoothly conveying objects, preferably containers filled with liquid, such as open beverage bottles or cans, so that they will not tip or spill as the conveyor accelerates or decelerates or as the containers are held in place on the moving conveyor for filling or some other operation. In order to accomplish this, the lubricant must provide gliding contact between the container and the conveyor track. In addition, the method involves the application of lubricant composition to remove spillage while maintaining the required lubrication. Thus, the invention as claimed in the present application does not reside in the compositions per se, but rather in the discovery that they are useful in a particular environment to provide a surprising result.

Given the nature of the present invention, applicants respectfully request withdrawal of this ground of rejection under 35 USC 103 because Moses relates to use of lubricant compositions for metal working and does not teach or suggest the use of the lubricant compositions to enable the smooth conveyance of objects produced by gliding contact as in claim 17 or liquid-filled containers as recited in instant claims 30-32. The Examiner attempts to cure the deficiency of the Moses reference by looking to the Douty et al reference. However, Douty et al addresses the problem of releasing coal fines from

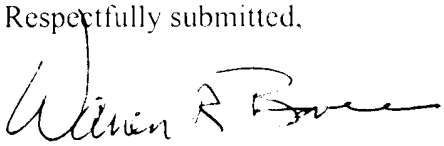
conveyors in mines. Douty et al is not concerned with the smooth conveying of liquid filled containers to avoid spillage and tipping of the containers as in the instant invention. The Examiner has offered no citation where such teachings are contained and applicants can find none. The Examiner states that Douty et al teaches the discontinuous application of lubricant to a belt citing Figure 1 of Douty et al. However, applicants do not appreciate why that shows discontinuous application. If anything, it shows continuous application at two different points on the conveyor. Indeed, at col. 6, lines 1-4, it appears that Douty et al attempts to obtain constant application of the silicone emulsion to the belt.

Moreover, as is apparent from a reading of the reference, Douty et al is concerned with promoting complete release of the coal fines and may use a wiper apparatus to assist (col. 5, lines 22 – 29). As further evidence that Douty et al has no relevance to the presently claimed method, Douty et al discusses at col. 8, lines 44-53 that application of the solution does not appreciably affect material slippage on the belt which has been coated, noting that solution applications were made on belts having gradients of up to 22 degrees without slippage of the material on the belt. This teaches away from applicants' invention where lubricity and controlled slippage are the goal (see instant Example 4 at pages 19-21).

Given the teachings of the references it is believed that neither reference taken alone or together teach or suggest the present invention and it is requested that the rejection under 35 USC 103 be withdrawn with respect to claims 17-35.

It is believed that up on reconsideration all of the claims will be seen to be in compliance with 35 USC 112 and neither anticipated by nor unpatentable over the cited references taken alone or in any combination. Early and favorable consideration is respectfully requested.

Respectfully submitted,



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